

**OCCUPATIONAL SAFETY
AND HEALTH STANDARDS BOARD**

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Attachment No. 2

INITIAL STATEMENT OF REASONS**CALIFORNIA CODE OF REGULATIONS**

TITLE 8: Chapter 4, Subchapter 4, Article 29, Section 2320.2
Low-Voltage Electrical Safety Orders

The Use of Barriers and Insulated Gloves**PROBLEM ADDRESSED BY THE PROPOSED ACTION**

This rulemaking action is being initiated at the request of the Division of Occupational Safety and Health (Division). The Division submitted memoranda dated March 18, 1998 and March 8, 1999 requesting amendments for Section 2320.2 of the Low-Voltage Electrical Safety Orders regarding work on energized equipment or systems. Division compliance inspections and accident investigations indicate that there have been a number of serious injuries and several fatalities to electricians and industrial workers performing work on energized 480/277 volt systems where employees were not using barriers or appropriate protective equipment such as insulated gloves where required. The Division indicates that some employers are misinterpreting the requirements of Section 2320.2(a)(3) such that insulated gloves are not used while working on energized 480/277 systems. Therefore, the Division proposed amendments to clarify the requirements in the Low-Voltage Electrical Safety Orders for the use of insulated gloves and suitable barriers to prevent accidental contact with energized conductors. This rulemaking will address the concerns of the Division.

SPECIFIC PURPOSE AND FACTUAL BASIS OF THE PROPOSED ACTION**Section 2320.2 Energized Equipment or Systems**

Section 2320.2 outlines the required conditions under which work on exposed energized parts of equipment or systems can be performed and specifies that an authorized person shall be responsible for removing any temporary personnel protective equipment from the work area and reinstalling all permanent barriers and covers once the work performed on the exposed energized parts of equipment or systems is completed.

Subsection (a)(3)

Existing subsection (a)(3) requires that suitable insulated gloves be worn when working with voltages in excess of 300 volts, nominal. An amendment is proposed to delete the word "suitable" and require the use of "approved" insulated gloves. As defined in the LVESO, Section

2305.4, the term "approved" in part refers to products or materials that have been listed, labeled, or certified as conforming to applicable governmental or other nationally recognized standards. When employees rely on insulating gloves to prevent exposure to energized conductors it is imperative that inferior products are not used. Insulating gloves are manufactured to meet the requirements of the American Society for Testing and Materials (ASTM) standard for such gloves. The proposed amendment is necessary to ensure that the insulating gloves used to perform work on exposed energized parts of equipment or systems will provide effective protection for the voltages involved.

An additional amendment is proposed for subsection (a)(3) to require that insulated gloves be worn when working with voltages in excess of "250 volts to ground" in lieu of the existing language which requires that the insulated gloves be worn for voltages in excess of "300 volts, nominal." The proposed amendment is necessary to ensure that insulated gloves are used when work is performed on energized 480/277 volt systems, such as industrial lighting circuits, because of the 480 volt phase to phase exposure hazard.

New Subsection (a)(4)

An amendment is proposed to relocate the requirement for "suitable barriers" from existing subsection (a)(5) to proposed new subsection (a)(4). The new subsection will specify that either suitable barriers or approved insulating material shall be provided and used to prevent accidental contact with energized parts. The proposed amendment is necessary to ensure that suitable barriers or approved insulated material are used to prevent accidental contact with energized parts. As a consequence of the proposed new subsection, the remaining subsections are renumbered.

Subsection (a)(5)

Existing subsection (a)(5) states that where required, suitable barriers, barricades, tags, or signs are to be in place for personnel protection. The use of suitable barriers as a protective method from contacting energized conductors is proposed for relocation from existing subsection (a)(5) to proposed new subsection (a)(4). This proposed amendment is necessary to eliminate duplicate language and requirements with respect to the use of barriers.

An additional amendment is proposed for subsection (a)(5) to relocate the phrase "for personnel protection" from the end of the sentence to after the phrase "Where required" at the beginning of the sentence. The proposed amendment is necessary to provide clarity to this subsection.

DOCUMENTS RELIED UPON

1. Memorandum dated March 18, 1998 to John MacLeod, Executive Officer, Occupational Safety and Health Standards Board from John Howard, Division of Occupational Safety and Health with attached Cal/OSHA form 9, Request for New, or Change in Existing Safety Order [Electrical Safety Orders, Section 2320.2(a)(3)]. Attachment A (includes 20 pages of accident report summaries)
2. Memorandum dated March 8, 1999 to John MacLeod, Executive Officer, Occupational Safety and Health Standards Board from John Howard, Chief, Division of Occupational Safety and

Health with attached Cal/OSHA form 9, Request for New, or Change in Existing Safety Order [Electrical Safety Orders, Section 2320.2]. Attachment B (includes 21 pages of accident report summaries)

These documents are available for review during normal business hours at the Standards Board Office located at 2520 Venture Oaks Way, Suite 350, Sacramento, California.

IDENTIFIED ALTERNATIVES THAT WOULD LESSEN ADVERSE ECONOMIC IMPACT ON SMALL BUSINESSES

No adverse impact on small businesses is anticipated from the implementation of the proposed amendments. Therefore, no alternatives which would lessen the impact on small businesses have been identified.

SPECIFIC TECHNOLOGY OR EQUIPMENT

This proposal will not mandate the use of specific technologies or equipment.

COST ESTIMATES OF PROPOSED ACTION

Cost or Savings to State Agencies

No costs or savings to state agencies will result as a consequence of the proposed action. Also see the heading below, "Impact on Businesses".

Impact on Housing Costs

The proposal will not significantly affect housing costs.

Impact on Businesses

The proposal will not result in a significant adverse economic impact on businesses, including the ability of California businesses to compete with businesses in other states. The proposal requires the use of insulated gloves when exposed to voltages in excess of 250 volts to ground. Language in the existing regulation requires the use of insulated gloves at voltages in excess of 300 volts, nominal. Those employers currently not using insulated gloves while working on 480/277 volt systems, such as lighting circuits, would need to provide employees with insulated gloves. However, the existing regulation requires the use of insulated gloves when personnel are working on energized 480/277 volt systems because of the potential for 480 volt contact. Therefore, the insulated gloves should already be used on these energized systems.

The addition of new subsection (a)(4) requires the use of suitable barriers, or approved insulated material to prevent accidental contact with energized parts. Suitable barriers are already required in existing subsection (a)(5). The use of barriers and insulating materials are a known and acceptable means of providing protection from accidental contact with energized conductors. In addition, the regulation requires that personnel receive instructions on the work techniques to avoid electrical hazards, such as the use of barriers and insulating materials. The proposal will not result in significant costs to effected businesses, but rather emphasize to employers that suitable barriers or approved insulation are required to prevent accidental contact with energized conductors.

Cost Impact on Private Persons or Entities

The proposal will not require private persons or entities to incur additional costs in complying with the proposal.

Costs or Savings in Federal Funding to the State

The proposal will not result in costs or savings in federal funding to the state.

Costs or Savings to Local Agencies or School Districts Required to be Reimbursed

No costs to local agencies or school districts are required to be reimbursed. See explanation under "Determination of Mandate."

Other Nondiscretionary Costs or Savings Imposed on Local Agencies

This proposal does not impose nondiscretionary costs or savings on local agencies.

DETERMINATION OF MANDATE

The Occupational Safety and Health Standards Board has determined that the proposed regulation does not impose a local mandate. Reimbursement by the state is not required pursuant to Part 7 (commencing with Section 17500) of Division 4 of the Government Code because the proposed amendments will not require local agencies or school districts to incur additional costs in complying with the proposal. Furthermore, this regulation does not constitute a "new program or higher level of service of an existing program within the meaning of Section 6 of Article XIII B of the California Constitution."

The California Supreme Court has established that a "program" within the meaning of Section 6 of Article XIII B of the California Constitution is one which carries out the governmental function of providing services to the public, or which, to implement a state policy, imposes unique requirements on local governments and does not apply generally to all residents and entities in the state. (County of Los Angeles v. State of California (1987) 43 Cal.3d 46.)

The proposed regulation does not require local agencies to carry out the governmental function of providing services to the public. Rather, the regulation requires local agencies to take certain steps to ensure the safety and health of their own employees only. Moreover, the proposed regulation does not in any way require local agencies to administer the California Occupational Safety and Health program. (See City of Anaheim v. State of California (1987) 189 Cal.App.3d 1478.)

This proposed regulation does not impose unique requirements on local governments. All employers - state, local and private - will be required to comply with the prescribed standard.

PLAIN ENGLISH STATEMENT

It has been determined that the proposal may affect small business. The express terms of the proposal written in plain English have been prepared by the Board pursuant to Government Code Sections 11342(e) and 11346.2(a)(1) and are available from the agency contact person named in the notice. The informative digest for this proposal constitutes a plain English overview.

ASSESSMENT

The adoption of the proposed amendments to this regulation will neither create nor eliminate jobs in the State of California nor result in the elimination of existing businesses or create or expand businesses in the State of California.

ALTERNATIVES THAT WOULD AFFECT PRIVATE PERSONS

No alternatives considered by the Board would be more effective in carrying out the purpose for which the action is proposed or would be as effective and less burdensome to affected private persons than the proposed action.